

Claims:

1. A string device formed with or incorporated with means for the transfer of communication signals or power, in applications of monitoring, control, communication, detection, measurement or power distribution, consisting of a passive structural core element (11) and an active longitudinal element (12), such as a conducting material, capable of power and/or signal transfer, **characterized by** that the active longitudinal element (12) being positioned at the outer surface of the core (11) so that it becomes accessible for external contacts.
- 10 2. A string device according to claim 1, **characterized by** that the longitudinal active element (18-21) being a conductor positioned in at least one longitudinal slit (14-17) or conduit of the structure (13), of which slit or conduit is accessible from the outer surface of the string device
- 15 3. A string device according to claim 2, **characterized by** that the conductor being a metal coat, an insulated wire, a fibre optic conductor, or a low melting point metal, for the transfer of communication signals, control signals or power.
- 20 4. A string device according to claim 1 or 2, for use as a heat detector, **characterized by** that the core (13) consists of an electric or optically non conducting material which is not structurally challenged by surrounding temperatures up to a range above a set threshold temperature, and which contains at least one track coating (18, 19) or wire of conducting material which breaks and/or becomes non conductive at a set threshold temperature.
- 25 5. A string device according to claim 4, **characterized by** that the conductor material being a low melting alloy, such as Woods metal, other alloys, polymers, or optical fibres which discontinue the signal flow at a set threshold temperature.
- 30 6. A string device according to claim 4 or 5, **characterized by** that it in two or more longitudinal ribbons, are arranged separate conducting tracks.
7. A string device according to claim 1, **characterized by** that the core (23) offering longitudinal conduits (26, 28, 30) available for conductors, such as electrical or optical (27, 29, 31) conductors.
- 35 8. A string device according to claim 7, **characterized by** that the conduits (26, 28, 30) being C shaped with a slit gap (27, 29, 31) which can be temporarily widened for insertion of wire like conductors (32, 33, 34) in each conduit.

9. A string device according to any one of claims 1-9, **characterized by** a longitudinal track (25, 48) or a ridge at the outer surface of the core (23, 35) for indication and positioning when connecting.
- 5 10. A string device according to any one of claims 7-9, **characterized by** that the core (23) being ribbon shaped with longitudinal tracks (26, 28, 30) grooved into one side.
11. A string device according to any one of claims 7-9, **characterized by** that the core (35) having a circular or elliptical cross section and the longitudinal tracks (36- 40) are arranged at the perimeter.
- 10 12. A string device according to claim 11, **characterized by** that the core having 3-8, preferably 5 tracks.
13. A string device according to any one of claims 7-12, **characterized by** that the string device is provided with an outer insulating sheath.
- 15 14. A connector system for string devices according to any one of claims 1-13, **characterized by** that at least one receptacle (46) for at least one end of a string device (35), and incorporating one or more contacts (49-52, 59) at the inner surface of the receptacle to provide a signal or current connection with one or more conductors (41-45) of the string device.
- 20 15. A connector system according to claim 14, **characterized by** that the receptacle or receptacles provides at least one longitudinal electrical contact knife (49-52) with its edge pointing inwards and making contact with a respective conductor (41-44) of the string device.
- 25 16. A connector system according to claim 14, **characterized by** that the receptacle being a photo coupler, particularly a light transmitter and/or a receiver (59), which may communicate with optical fibre or nano fibre (45) of the string device.
- 30 17. A connector system according to any one of claims 14-16, **characterized by** that the receptacle being cylindrical for the splice connection of two string devices.
18. A connector system according to claim 17, **characterized by** that the receptacle (46) having radially protruding pin terminals (53-56) for at least one contact knife (49-52).

19. A connector system according to any one of claims 13-18, **characterized by** that the receptacle or receptacles having angled sharp knives (57) that digs into the outermost insulated parts of the string device and prevents it from being pulled out.
- 5 20. A connector system according to any one of claims 14-19, **characterized by** that the receptacle being designed to fit the outer shape of the string device and aid the insertion and completion of contacts.
- 10 21. A connector system according to claim 16, **characterized by** that the photo coupler (59) being positioned externally upon the receptacle (46) and making optical coupling through a slit.
22. A connector system according to claim 14, **characterized by** that the receptacle being designed to contact conductors of a string device by a crimping tool.